

wherein said stimulation increases the abundance of germline stem cells in said population as compared to a population in which signal transduction of said BMP signaling pathway has not been stimulated.

25. (Twice Amended) A method of autologous transplantation comprising transferring at least one germ line stem cell produced by the method according to Claim 1 into a second host *Drosophila*.

Kindly enter and consider the following new claims:

44. (New) A method according to Claim 1, wherein said Dpp is ectopically expressed from a transgene in germarium of said host *Drosophila*.

45. (New) A method according to Claim 16, wherein said BMP signaling pathway is increased by increasing expression of Dpp in a stem cell of said population.

46. (New) A method according to Claim 16, wherein said BMP signaling pathway is increased by increasing expression of Dpp in a non-stem cell of said population.

47. (New) A method according to Claim 46, wherein said non-stem cell is a somatic cell of an ovary.

48. (New) A method according to Claim 47, wherein said somatic cell is a somatic follicle cell.

49. (New) A method according to Claim 48, wherein said somatic follicle cell is an anterior somatic follicle cell.

50. (New) A method according to Claim 46, wherein said Dpp is secreted by said non-stem cell and binds to a BMP receptor of a stem cell to stimulate said BMP signaling pathway.